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Notice of Allowability

Application No.

10/001,524

Examiner

Quan-Zhen Wang

Applicant(s)

HEINZ ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/13/06.
2. ☒ The allowed claim(s) is/are 1-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 13, 2006 has been entered.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Alan R. Loudermilk on August 16, 2006.

3. The application has been amended as follows:

In claim 1, lines 6, 10, 14, 18-19, 22, and 23-24, the phrase "optical multiplexer" has been replaced by --- optical switch/multiplexer ---.

Allowable Subject Matter

4. The following is an examiner's statement of reasons for allowance:

Claims 1-30 are allowable since the prior art of record does not teach or suggest in combination an Ethernet optical area network comprising: a fiber optic ring; at least a first user facility coupled to the fiber optic ring, wherein the first user facility is coupled to the fiber optic ring via first and second Ethernet switches, first and second wireless transceivers and a first optical multiplexer, wherein the first user facility is connected to the first Ethernet switch, the first Ethernet switch is connected to the first wireless transceiver, the first wireless transceiver communicates signals wirelessly to the second wireless transceiver, the second wireless transceiver is connected to the second Ethernet switch, the second Ethernet switch is connected to the first optical multiplexer, and the first optical multiplexer is connected to the fiber optic ring; at least a second user facility coupled to the fiber optic ring, wherein the second user facility is coupled to the fiber optic ring via third and fourth Ethernet switches, third and fourth wireless transceivers and a second optical multiplexer, wherein the second user facility is connected to the third Ethernet switch, the third Ethernet switch is connected to the third wireless transceiver, the third wireless transceiver communicates signals wirelessly to the fourth wireless transceiver, the fourth wireless transceiver is connected to the fourth Ethernet switch, and the fourth Ethernet switch is connected to the second optical multiplexer, and the second optical multiplexer is connected to the fiber optic ring; a network operation center ("NOC") coupling network management control information to and from the fiber optic ring, wherein the NOC is coupled to the fiber optic ring via a

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third optical multiplexer and a fifth Ethernet switch, wherein a server is connected to the fifth Ethernet switch, the first Ethernet switch is connected to the third optical multiplexer, and the third optical multiplexer is connected to the fiber optic ring; wherein the NOC includes a network management application running on the server for remotely managing the EOAN by providing network management control information to the first, second, third, fourth, and fifth Ethernet switches, wherein data is communicated between the first and second user facilities via a communication path directed by the first, second, third, fourth, and fifth Ethernet switches based on the provided network management control information, wherein end-to-end Ethernet data communications are provided between the first and second facilities using an Ethernet protocol; in addition to other recited limitations.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Graves et al. (U.S. Patent Application Publication US 2002/0191250 A1) discloses a communication network for a metropolitan area comprising three types of nodes: an access multiplexer, a photonic switch, and a core node.

Anderson (U.S. Patent Application Publication US 2002/0013858 A1) discloses an apparatus and method for reducing data transmission within a network.

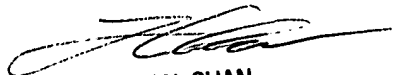
Amoruso (U.S. Patent US 6,359,729 B1) discloses an optical communication system and component control architectures and methods.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

qzw


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